



The Conservation Strip

CONSERVING NATURAL RESOURCES FOR A BETTER ENVIRONMENT

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FOUR REASONS TO PROTECT WATER QUALITY IN FAUQUIER COUNTY

By Tom Turner, Conservation Specialist

YOU – You need to eat, and seafood such as oysters, blue crabs, and striped bass (rock fish) all depend on a healthy river system feeding the Chesapeake Bay to flourish. As a result of Virginia's cultural practices, the Bay has traditionally been the receiving grounds for a great deal of our waste. Unsurprisingly, the fisheries there have suffered. The oyster population within the Chesapeake Bay for example, is only about two percent of its historic level. To put this into perspective, imagine the wind powered fishing boats of the late 1800's harvesting about 100 million pounds of oysters annually from the Bay for a U.S. population of about 50 million. In contrast, at the turn of the 21st century, watermen with gas powered boats and mechanical lifts harvested less than 3 million pounds annually for a U.S. population of about 288 million. Even the striped bass fishery, once touted as an icon for managed fishery recovery, has developed serious problems with fish now being caught underweight and plagued with lesions. In order to once again enjoy the fruits of the world's largest estuary, protecting water quality on a local level has to become a priority.

YOUR KIDS- According to the Virginia Department of Environmental Quality there are currently nine streams, or surface water segments, in Fauquier County that are on Virginia's Impaired Waters list. This is a list prepared to identify streams that do not meet water quality standards for designated uses. In the case of the streams listed in Fauquier County, none support the swimming and fishing use. This means these stream segments are polluted to such an extent that should your kids want to go fishing or swimming in one of these streams they would have a significant chance of coming in contact

with various pathogens (disease causing organisms).

YOUR LIVESTOCK- As previously mentioned, pathogens are plentiful in most surface waters in the County. Some naturally, and some encouraged by poor decisions on our part. If your livestock are drinking from surface waters, they are continually being bombarded with these pathogens and more than likely suffer the consequences, whether you notice it or not. Some waterborne parasites use a host (your livestock) to fulfill a needed part of their lifecycle, then return to the water, via feces, to spawn another generation of parasites. To break this cycle, the animal needs a clean, parasite free source of water. Best management practices aim to reduce or restrict livestock access to ponds and streams through fencing and to provide an alternative water supply from a domestic well or spring.



Blue crabs, oysters, and many fishes in the Chesapeake Bay have declined dramatically in recent decades as a result of declining water quality.

(Continued on page 4)

Teacher's Corner

The JMSWCD frequently receives information concerning **environmental grants** and other funds available from various government agencies and private organizations. The District is developing an email list so this information can be forwarded to interested parties. Any teacher who wants this information should call the District at 347-3120 x 3, or email Chuck Hoysa at chuck.hoysa@va.nacdn.net. The District will be happy to assist with the grant writing process, provide letters of support, or serve as a cooperating partner where appropriate.

District staff members are also available to make **classroom presentations** on a variety of natural resource topics. A 3 fold brochure was developed in August and forwarded to all schools. The brochure is also posted on the JMSWCD website at <http://www.fauquiercounty.gov/government/departments/jmswcd>. Select Classroom Educational Programs. A new offering this year involves trees and forestry. All schools were visited this summer and inventoried for tree species. October would be a great month for outdoor activities involving trees, as would May. However, pressed specimens are available for winter use.

While **field trip** budgets may be tight, consider a local visit to a site in Fauquier County. There are several locations that offer great opportunities for natural resource/environmental activities. District staff can help

plan activities, and meet groups at locations around the county. Sites to consider include Crockett Park, Monroe Park, Sky Meadows State Park, Whitney State Forest, the Warrenton Greenway, and Marshall Schoolhouse #18 to name a few.

The **Smithsonian National Zoological Park Conservation and Research Center** is located just outside Front Royal. They offer outreach programs for grades 3-7. To learn more about this unique opportunity, check out their website at www.nationalzoo.si.edu/education/classroomresources, and select CRC School Outreach Programs. Programs fill quickly!

The **State Arboretum of Virginia**, located at Blandy Farm in Boyce, is only 30 scenic miles northwest of Warrenton on Route 50. The Arboretum has a great education program for youth, and encourages classes to schedule field trips. They offer SOL based activities for all grades. Most programs require a fee of \$3 per student. The Arboretum has a great website located at <http://www.virginia.edu/blandy>. From the homepage, check out the education programs by selecting Elementary/Secondary Programs under the K-12 Program heading on the left side of the page. In addition to school field trips, the Arboretum is also a great place for a family outing. The Arboretum features over 1000 species of plants on 175 acres, and is open 365 days a year from dawn to dusk with no entry fee.

Envirothon Competition Update

The **Envirothon** is an annual competition sponsored by Canon, in which winning state/provincial teams compete for recognition and scholarships by demonstrating their knowledge of environmental science and natural resource management. The teams, each consisting of five high school-aged students from participating US States and Canadian Provinces, exercise their training and problem-solving skills in a competition centered on four universal testing categories (**soils/land use, aquatic ecology, forestry, and wildlife**) and a current environmental issue.

In the summer of 2004, the team representing **Virginia placed second in the national competition**, which was held in West Virginia. Teams from 44 states and 7 Canadian provinces participated.

The Virginia team consisted of five home schooled students from Augusta County. Each team member received a \$2,000 scholarship and Canon products.

Virginia's competition is organized through the Virginia Association of Soil and Water Conservation Districts. A planning meeting was held in September, and full information and study guides will be available soon. District competition will be held in late April or early May, and State competition will be held May 15-16.

Each Conservation District may enter one team in the district contest. If there is more than one team per district, a local competition must be held to determine the district representative. Anyone interested in forming a team should call 540-347-3120.

Money Available for Cost Share and Conservation Planning

There are numerous conservation programs available through various agencies that operate at the District level. Financial incentives are available in the form of cost share and tax credits to landowners who would like to install conservation practices that will protect their natural resources and maintain productivity. Many of the cost share programs pay up to 75% of the cost of installation. Some of the most popular practices include stream fencing, alternative water systems, and riparian buffers. Technical assistance in the design and installation of all best management practices is provided to ensure their success. While some practices can be installed almost anytime, a few are seasonal. The establishment of small grain cover crops is an example of a practice that is implemented in fall.

Recent research has indicated that nitrogen losses to groundwater under crop fields are perhaps more common than previously thought. As a result, **small grain cover crops** are gaining recognition as one of the best options for controlling nutrient losses in many cropping systems. To make cover crops more appealing to grain farmers, the Virginia Agricultural Best Management Practices Cost Share Program is offering financial incentives to plant them. Farmers can earn a **\$20/acre** incentive payment and a 25% state tax credit for planting small grain cover crops this fall on lands that have the potential for nutrient loss to ground water or surface water. The practice consists of planting Abruzzi Rye, Winter Wheat, Barley, or Triticale at a rate of 1.5 – 2 bushels per acre by November 1, 2004 and then killing the crop between March 15th and May 15th 2005. Harvesting of hay, haylage, silage, grain, or seed is not permitted but the crop may be grazed by livestock as long as the field retains 60% cover. For more information contact the JMSWCD (540) 347 – 3120 ext. 3.

Cost share programs are, however, only part of the picture. Effective, long range planning for conservation involves a broader perspective which includes the development of a conservation plan. Conservation planning helps a landowner attain sustainable use and sound management of soil, water, air, plant and animal

resources. Resource professionals from the John Marshall Soil and Water Conservation District, USDA Natural Resources Conservation Service, the Farm Service Agency, and Virginia Department of Forestry are available to assist landowners in developing conservation plans. For information on conservation planning and incentive programs, contact the John Marshall Soil and Water Conservation District at 540-347-3120.



Small grains develop deep root systems that bring nutrients back to the surface and reduce leaching into ground water.

Fall Foliage Forestry & Wildlife Bus Tour

An all day bus tour on Friday, October 22, 2004 will visit properties throughout scenic Fauquier County where wildlife and forestry practices are showcased. Experts will share tips on how to improve wildlife habitat, enhance forest productivity and earn income from your land. Excursions include visits to a recently completed timber harvesting operation, the region's largest wetland, a wildlife management area, a water quality conservation installation and more.

Registration for the event is \$35.00 (\$40.00 at the door) and will include a catered lunch and all program materials. Pre-registration is required. Call the Fauquier County Extension Office at 540-341-7950 for more details.

Program sponsors include forest industries, Va Dept of Forestry, Va Dept. of Game & Inland Fisheries, John Marshall Soil & Water Conservation District, Virginia Tech, Virginia Cooperative Extension, Virginia Forestry Association, and others.

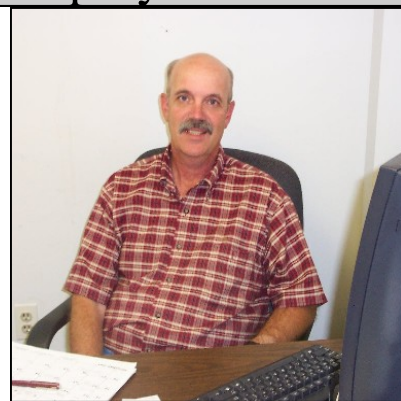
(Continued from page 1)

YOUR LAND- Whether you own or lease land, preventing soil and water degradation is the best way to protect your investment. Land can remain productive (producing needed natural resources or agricultural commodities) well beyond our time. But in order to achieve this sustainability the land must be cared for in a way that does not compromise its productive base. An example of this would be farming the best land and using the rest to reduce or buffer the impact of the farming operation. In other words, farm like you'll live forever. Many best management practices increase the productivity of the land at the same time they are working to protect water quality. By preserving sustainable agriculture in our community through the use of best management practices we are assuring the health and beauty of the landscape for generations to come.

The last word in ignorance is the man who says of an animal or plant, "What good is it?" Aldo Leopold

New Employee

Rex Rexrode is the new District Conservationist for the United States Department of Agriculture's Natural Resources Conservation Service. Rex is a graduate of West Virginia Institute of Technology and West Virginia University.



Rex has worked for the Natural Resource Conservation Service for 25 years as a Soil Conservation Technician, Soil Conservationist, and most recently, as District Conservationist in Point Pleasant, West Virginia.

Rex and his wife Debbie live in Charlottesville, where his wife is attending graduate school at the University of Virginia. They have three children, two of which are currently attending college. Rex enjoys Civil War history, biking, and other outdoor activities. He looks forward to working with the landowners of Fauquier County.

EVENT CALENDAR

- October 7 - Master Gardener Lecture - 'Trees, Glorious Trees! Underused Trees in the Landscape' - 7pm Warren Green Building, Free, but registration requested, phone 540-341-7950 x 19.
- October 16 - Fauquier County Food Coalition Food Distribution, Contact Heather Greenwood, 540-341-7950 x 13.
- October 22 - Fall Foliage Forestry and Wildlife Bus Tour - All day tour visiting sites throughout Fauquier County. \$35 with pre-registration, \$40 day of event. Contact Fauquier County Extension at 540-341-7950.
- November 4 - Master Gardener Lecture - 'Winter Interest in the Landscape' - 7pm, Warren Green Building Free, but registration requested, phone 540-341-7950 x 19
- November 20 - Fauquier County Food Coalition Food Distribution, Contact Heather Greenwood, 540-341-7950 x 13.
- December 15 - Field Crop Conference (Tentative) - Contact Keith Dickinson, 540-341-7950
- December 18 - Fauquier County Food Coalition Food Distribution, Contact Heather Greenwood, 540-341-7950 x 13

The Naked Soil

By Kerry Wharton, Erosion and Sediment Specialist

Imagine a wooded two acre lot. As rain falls on this two acre wooded lot, the impact is being slowed down by trees and undergrowth. Now imagine this two wooded acre lot cleared. No vegetation onsite increases velocity and volume of runoff. There are no trees or undergrowth to slow down or absorb water. Rain hits the bare earth moving it down slope.

Soil erosion occurs naturally by action of wind, water, ice and gravity. This normal process has been accelerated by man made activities. A typical construction site can erode at a rate as high as 100 to 500 tons/acre/year. The use of erosion and sediment controls is important in keeping sediment runoff from waterways and adjacent properties. Silt fence, sediment traps, and other E&S controls have helped keep sediment contained on construction sites. Ultimately, the best type of control is vegetation.

Vegetative cover is very important in controlling erosion. Vegetation provides protection from the impact of rain on soil, absorbs and decreases velocity of water. It reduces sheet erosion, anchors and reinforces the soil with its roots systems. Limiting the amount of soil exposure can decrease erosion and sediment runoff. Steep slopes, highly erodible soils, and stream banks should be given special consideration.

It is important to have a plan before clearing a site.

You need to know the phases of construction. Think about limiting the amount of vegetation to be removed. Limiting the amount of soil exposure can be beneficial in the long run; there is less cost in maintenance, materials, and construction equipment. A vegetative cover can help avoid problems such as gully erosion which normally requires heavy equipment and special techniques. Damage to adjacent properties can also get costly. Construction is never predictable when you also consider the weather factor.

Select plants appropriate to the season and site conditions from table shown. Take in consideration of liming, and fertilizer when preparing for seed planting. It is also important to consider mulching as well.

Mulching of seeded areas is important. Mulch protects against rain and wind while seeds are germinating. It also reduces loss of soil moisture during extended dry periods. A wide variety of mulches can be used. More common materials and methods may include: hay or straw (2 tons/acre), jute netting, plastic netting or fiber mulch.

Think ahead this fall and be prepared this winter. Avoid clearing vegetation, or stabilize denuded areas temporarily or permanently with seed/straw. Think of the benefits such as saving on cost and less sediment pollution to the Chesapeake Bay. Charts with recommended seeding mixtures are listed on Page 6.

The Conservation Strip is a quarterly publication of the **JOHN MARSHALL SOIL AND WATER CONSERVATION DISTRICT**, 98 Alexandria Pike, Suite 31, Warrenton, VA 20186

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Temporary and Permanent Seeding Mixes for Piedmont Virginia

Site Specific seeding Mixtures for Piedmont Area – Permanent Seeding Mixtures	
	Total Lbs. Per Acre
<u>Minimum Care Lawn</u> Commercial or Residential -Kentucky 31 -Perennial Ryegrass -Kentucky Bluegrass	175-200lbs 95-100% 0-5% 0-5%
<u>High-Maintenance Lawn</u> -Kentucky 31	200-250 lbs. 100%
<u>General Slope (3:1 or less)</u> -Kentucky 31 Fescue -Red Top Grass -Seasonal Nurse Crop	128 lbs. 2 lbs. 20 lbs.
<u>Low –Maintenance Slope (steeper than 3:1)</u> -Kentucky 31 Fescue -Red Top Grass -Season Nurse Crop -Crownvetch	108 lbs. 2 lbs. 20 lbs. 20 lbs.
Use seasonal nurse crop in accordance with seeding dates	
Feb 16 th through April	Annual Rye
May 1 st through August 15 th	Foxtail Millet
August 16 th through October	Annual Rye
November through February 15 th	Winter Rye

Source: VA. DSWC

Acceptable Temporary seeding plant Materials		
Planting Dates	Seed Type	Rate lbs./acre
Sept. 1- Feb. 15*	50/50 Mix of Annual Ryegrass & Cereal (Winter) Rye	50-100
Feb. 16-Apr. 30	Annual Ryegrass	60-100
May 1- Aug 31	German Millet	50



Quick germinating cover in a drainage swale on a construction site holds soil in place, slows down water flow, and reduces nutrient and sediment runoff.

*Use for late fall seedings, winter cover. Tolerates cold and low moisture.

In this Issue...

- **4 Reasons to Protect Water Quality**
- **Teachers Corner**
- **Money for Cost Share**
- **Forestry & Wildlife Bus Tour**
- **New Employee**
- **Event Calendar**
- **Naked Soil**